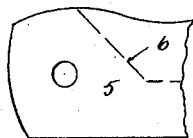
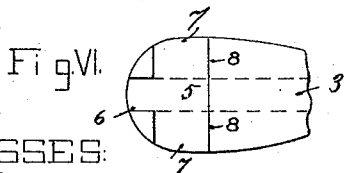
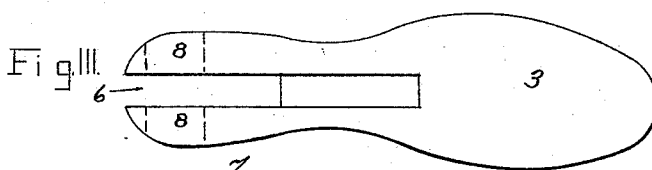
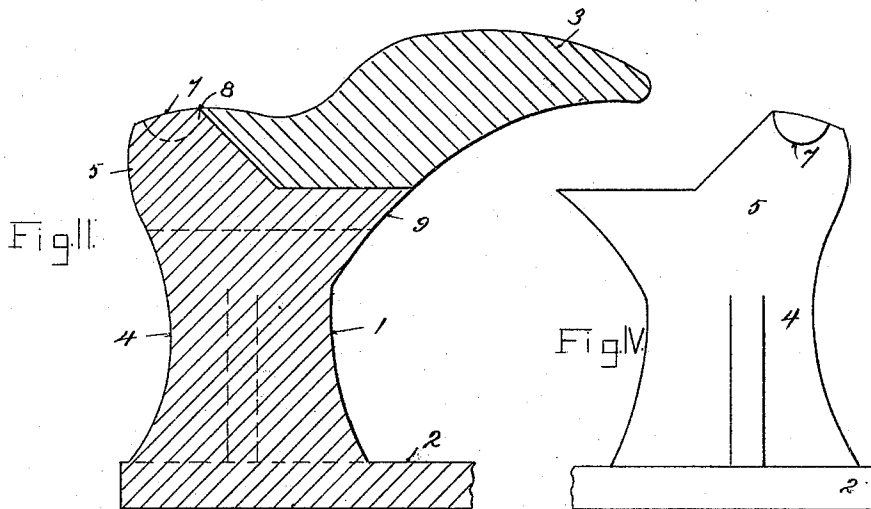
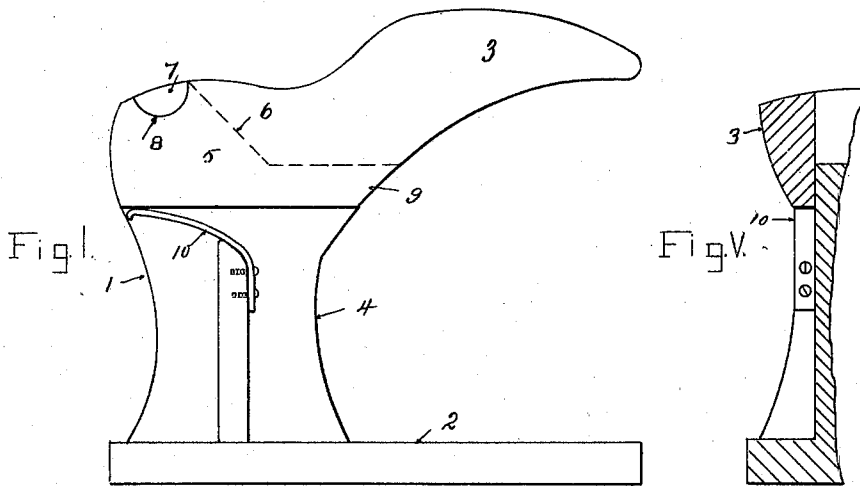


(No Model.)

W. E. FORSTER.
LAST FOR LEVELING MACHINES.

No. 545,881.

Patented Sept. 10, 1895.



WITNESSES:

Victor G. Sanaberg
Ed. Winkley

Fig VII.

INVENTOR:

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UNITED STATES PATENT OFFICE.

WILLIAM E. FORSTER, OF LYNN, MASSACHUSETTS.

LAST FOR LEVELING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 545,881, dated September 10, 1895.

Application filed June 28, 1894. Serial No. 515,936. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. FORSTER, a citizen of the United States, and a resident of Lynn, in the county of Essex and Commonwealth of Massachusetts, have invented a new and useful Improvement in Lasts for Leveling-Machines, of which the following is a specification.

In that class of leveling-machines known in the trade as "direct-pressure" machines the operation of leveling a shoe is performed by a male and female former, the shoe being placed upon the male former and the female former brought in contact therewith and pressure applied. The male former is commonly termed a "last" or "jack" and the female former a "lasting-form."

My invention relates to such last or jack; and it consists of a divided last and the form and arrangement of parts thereof and the resulting combinations.

The object of my invention is to furnish a device whereby machines of the class above described may be adapted to different sizes and styles of shoes without changing the entire last.

My invention is illustrated by the drawings herewith submitted, in which—

Figure 1 is a side view of a last or jack embodying my invention, showing the last-supporting table of the machine. Fig. 2 is a sectional view of same. Fig. 3 is a plan view of upper member of divided last. Fig. 4 is a side view of lower member of same. Fig. 5 is a partial sectional view. Fig. 6 is a top view of heel portion of last. Fig. 7 is a partial side view showing a modified form of my invention.

Similar figures of reference refer to similar parts throughout the several views.

Reference being had to the drawings, 1 represents the last or jack, and 2 the last-supporting table, upon which the same is mounted. As heretofore constructed for the class of machines hereinbefore described, the last 1 consisted of a single member and was provided with a device by means of which it could be adjusted upon table 2. To adapt the machine to a shoe requiring a different shape of the upper part of the last, the entire last was removed and another adjusted.

In my invention the last 1 is divided at or near the instep, forming the upper member 3

and the lower member 4. The division is such that the upper part 3 includes substantially all portions of the last 1, which are necessary to form the sole and hold the shoe in position upon the last, and hence substantially all parts the form of which is necessarily changed for different size and styles of shoes, leaving in the lower member 4 substantially those portions of the last 1 which act to support the member 3 and which within certain limits will perform such function for any size or shape of member 3. The members 3 and 4 are so connected that the member 3 may be readily removed from member 4 or adjusted thereon, and when adjusted is firmly held by member 4 in position to receive pressure.

I secure the above result by means of longitudinal and lateral interlocking connections between the members, a preferred form of which is described as follows: Upon the member 4 is a longitudinally-extending tongue 5, fitted to a longitudinal groove 6 in the member 3. Upon opposite sides of the tongue 5 are placed the laterally-projecting tongues 7 7, which are fitted to the lateral grooves 8 8 upon the member 3 and adapted to engage with the same. To adjust the member 3, the tongue 5 is inserted in the groove 6 and the tongues 7 7 in the grooves 8 8. The member 3 is then turned forward and downward until the tongue 5 strikes the bottom of the groove 6, when the connections interlock and the member 3 is held firmly by the tongue 5 and tongues 7 7 in position to receive pressure.

I wish to say that the above-described device may be modified in detail without affecting the essential nature of my invention. For example—a removable pin extending through the tongue 5 and sides of groove 6 (see Fig. 7) may be substituted for the tongues 7 7 and grooves 8 8; but such pin must be inserted by the operator, rendering the device in such form less convenient than in form heretofore described, in which the connections between the members interlock automatically when the member 3 is in position to receive pressure. In order to relieve as far as practical the tongues 7 7 from the strain of the pressure on part 3, I have provided the tongue 5 with a projection or instep-rest 9, which extends substantially horizontally toward the front of the member 3 and acts as a support for same.

The instep-rest may be conveniently fitted to an extension of groove 6 or otherwise suitably arranged so that same does not interfere with the adjustment of a shoe upon last 1. To prevent the raising and displacement of part 3 when the last is separate from the lasting-form, I find the following to be a convenient device: On the part 4 is secured a spring 10, which bears against the upper member 3 back of its fulcrum upon the lower member 4, its tendency being to tip the member 3 forward. The spring 10 may conveniently consist of a strip of resilient material, secured at one end to the lower member 4 and held obliquely thereon and bent to give required tension as the member 3 is adjusted. Any convenient form of spring may, however, be substituted therefor.

To adapt my improved last to different sizes and styles, various modifications of member 3, both as to size and shape, are provided, each, however, having a similar form and arrangement of grooves 6 and 8 8, so that same can be interchangeably adjusted upon the member 4. The operation of my invention has already been sufficiently described in connection with the description of the several parts.

I claim as novel, and desire to secure by Letters Patent, in a last for leveling-machines—

1. The combination of an upper and lower last member divided at or near the instep, transversely extending interlocking connections between the members, an instep rest upon the lower member projecting toward the instep, and a bearing for said rest upon the upper member adjacent to the instep, substantially as described.

2. The combination of an upper and lower last member, a vertical tongue formed upon

the lower member, an instep rest forwardly projected from the lower member, a groove at the back of the upper member to receive the tongue on the lower member, and a bearing for the instep rest adjacent to the instep of the upper member, substantially as described.

3. The combination of an upper and lower last member, a vertical tongue on the lower member, a forwardly projected tongue upon the lower member extending toward the instep of the upper member, and vertical and longitudinal grooves upon the upper member to receive the tongues on the lower member, substantially as described.

4. The combination of an upper and lower last member, a vertical tongue on the lower member, a lateral tongue formed upon the vertical tongue, and vertical and lateral grooves upon the upper member to receive said tongues, substantially as described.

5. The combination of an upper and lower last member divided at or near the instep, transversely extending interlocking connections between the members, and instep rest upon the lower member projecting toward the instep of the upper member, and a suitably placed string for preventing the displacement of the upper member, substantially as described.

6. The combination of an upper and lower last member, a fulcrum for the upper member upon the lower member, and a spring secured to the lower member and arranged to bear upon the upper member back of its fulcrum, substantially as described.

WILLIAM E. FORSTER.

Witnesses:

VICTOR C. SANDBERG,
BENJ. PHILLIPS.